

REMARKS/ARGUMENTS

I. General Remarks.

At the time of the Office Action, Claims 24, 25, 27, 28, and 31-52 were pending. Claims 24, 25, 27, 28, and 31-35 are currently withdrawn in response to a restriction requirement. Claims 36-52 stand rejected. Claims 24, 25, 27, 28, and 31-35 are canceled herein in response to the restriction requirement. Claims 36-38, 45 and 49 are currently amended herein.

Applicants respectfully request that the above amendments be entered, and further request reconsideration in light of the amendments and remarks contained herein. Applicants respectfully submit that these amendments add no new matter to the application and are supported by the specification as originally-filed. All the amendments are made in a good faith effort to advance the prosecution on the merits of this case. Applicants thank the Examiner for his careful consideration of this application, including the references Applicants have submitted.

II. Remarks Regarding Restriction Requirement.

In a previous office action dated August 7, 2006, the Examiner issued a restriction requirement under 35 U.S.C. § 121 between claims 24, 25, 27, 28, and 31-35, drawn to a composition classified in class 507, subclass 217; and claims 36-52, drawn to treating subterranean zones, classified in class 507, subclass 217. In response to this restriction requirement, Applicants have cancelled claims 24, 25, 27, 28, and 31-35. No amendment to inventorship is necessitated by this election. Applicants reserve the right to present the cancelled claims in one or more divisional applications.

III. Remarks Regarding the Rejections of Under 35 U.S.C. § 102(b) and § 103(a)

A. Rejections over *Gupta*

The Examiner has rejected claims 36-52 under 35 U.S.C. § 102(b) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over U.S. Patent No. 5,305,832 issued to Gupta, *et al.* (hereinafter "*Gupta*").

With respect to this rejection, the Examiner states:

Gupta claims (#1, 2) fracturing subterranean formations with an aqueous fluid of gelling agent (eg hydroxypropylguar) and crosslinking agent at a pH of 10-12. According to applicant (paragraph 6) this pH causes the insoluble residue to dissolve. Presumably, Gupta would inherently be devoid of insoluble

residues also. Note that applicant does not consider crosslinkers to be insoluble gelling agents (paragraph 17 of spec). The amount of gelling agent is 10-100 pounds per thousand gallons of water (col 3 line 58). In regards to claim 45's addition of water in two separate steps, any number of water additions (as long as the total water is the same) would result in the same final product. Any mixing order or partial additions in the mixing sequence would have been prima facie obvious.

(Office Action, pages 2-3.) Applicants respectfully disagree. Applicants submit that the Examiner has not shown that *Gupta* discloses every element, either explicitly or inherently, or suggests every element as recited in claims 36-52 as required to anticipate the claims under 35 U.S.C. § 102(b), or to obviate the claims under 35 U.S.C. § 103(a). MPEP § 2131, 2142.

With respect to as-amended claim 36, Applicants respectfully submit that *Gupta* does not explicitly disclose or suggest the use of a viscous gelled treating fluid that is "substantially devoid of an insoluble gelling agent residue and remains substantially devoid of the insoluble gelling agent residue while in a subterranean zone." Nor does *Gupta* inherently disclose this missing recitation. In order to inherently disclose an element in a claim, "the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art," and that it would be so recognized by persons of ordinary skill. *Id.* at § 2112. "Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient." *Id.*

As previously stated by Applicants, a gelling agent residue is produced upon the hydration of certain gelling agents. *See* Specification at ¶ [0004]. Thus, after certain gelling agents are already hydrated, and therefore have produced a residue, Applicants disclose that a base may then be added to the treatment fluid and allowed to dissolve the gelling agent residue, such that the treatment fluid is substantially devoid of a gelling agent residue and will remain substantially devoid of such residue. *See* Specification at ¶¶ [0006] and [0022]. Furthermore, one of ordinary skill in the art would recognize that the dissolution of such a residue is not usually instantaneous, but rather is generally dissolved over a period of time.

Gupta discloses that "a pH adjusting material can be added to the aqueous fluid before, after, or during the addition of the gelling agent to the aqueous fluid." *Gupta*, col. 3, lines 23-25. The mere fact that *Gupta* discloses that a base may be added to the aqueous fluid after the addition of the gelling agent is not sufficient to establish that the methods disclosed in

Gupta necessarily involve the use of a viscous gelled treating fluid that is “substantially devoid of an insoluble gelling agent residue and remains substantially devoid of the insoluble gelling agent residue while in a subterranean zone.” As previously indicated, the dissolution of the residue is not usually instantaneous, but rather it is dissolved over a period of time. *Gupta* does not disclose that the base is added to the fluid and given a sufficient amount of time to dissolve any residue that is present, and thus, even if that result may occur in *Gupta*, it will not necessarily occur. In fact, *Gupta* recognizes that a residue in fact would be present by stating that the methods disclosed allow for a “lower base gel loading” which results in “lower residues and consequently less damage to the formation and proppant pack.” *Gupta*, col. 2, line 68-col. 3, line 4; *see also* col. 2, lines 40-44. Thus, *Gupta* does not inherently disclose all the elements of Applicants’ claim 36.

Moreover, with respect to independent claim 45, Applicants respectfully assert that *Gupta* does not disclose or suggest “allowing the base to dissolve substantially all of the water insoluble residue.” Rather, *Gupta* merely discloses that “a pH adjusting material can be added to the aqueous fluid before, after, or during the addition of the gelling agent to the aqueous fluid.” *Gupta*, col. 3, lines 23-25. Thus, *Gupta* does not disclose or suggest all elements of Applicants claim 45.

Therefore, Applicants respectfully assert that *Gupta* does not disclose each element of independent claims 36 and 45, and thus those claims are patentable over *Gupta*. Furthermore, since “a claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers,” and since claims 37-44 and 46-52 depend, either directly or indirectly, from claims 36 or 45, these dependent claims are allowable for at least the same reasons. *See* 35 U.S.C. § 112 ¶ 4 (2004). Accordingly, Applicants respectfully request the withdrawal of these rejections.

B. Rejections over *Briscoe*

The Examiner has rejected claims 36-52 under 35 U.S.C. § 102(b) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over U.S. Patent No. 4,336,145 issued to *Briscoe* (hereinafter “*Briscoe*”).

With respect to this rejection, the Examiner states:

Briscoe teaches aqueous well treating fluids (col. 1 line 8).
Briscoe exemplifies liquid gel concentrates (table I) of hydroxypropylguar, water, NaOH and optionally inhibitor. The

pH of the mixture is 9-14 (col 10 line 27). This envelops applicant's preferred pH range of "about 10-13" (claim 34). According to applicant (paragraph 6) this pH causes the insoluble residues to dissolve. Presumably, *Briscoe* would inherently be devoid of insoluble residues also. The concentrate can be diluted at a 1:15 ratio with additional water (col 8 line 15). In order to reverse the inhibition, acid can be added to lower the pH to 5-9 (col 7 line 40). The pH adjustment is not always necessary (col 8 line 8).

(Office Action, page 3.) Applicants submit that the Examiner has not shown that *Briscoe* discloses or suggests every element as recited in claims 36-52 as required to anticipate the claims under 35 U.S.C. § 102(b), or to obviate the claims under 35 U.S.C. § 103(a). MPEP § 2131, 2142.

In particular, with respect to independent claim 36, Applicants respectfully submit that *Briscoe* does not explicitly disclose or suggest the use of a viscous gelled treating fluid that is "substantially devoid of an insoluble gelling agent residue and remains substantially devoid of the insoluble gelling agent residue while in a subterranean zone." Nor does *Briscoe* inherently disclose this missing recitation.

As previously stated, a gelling agent residue is produced upon the hydration of certain gelling agents. See Specification at ¶ [0004]. Thus, after certain gelling agents are already hydrated, and therefore have produced a residue, Applicants disclose that a base may then be added to the treatment fluid and allowed to dissolve the gelling agent residue, such that the treatment fluid is substantially devoid of a gelling agent residue and will remain substantially devoid of such residue. See Specification at ¶¶ [0006] and [0022]. In contrast, *Briscoe* discloses, in one embodiment, adding a base and a hydration inhibitor to a gelling agent to produce "an aqueous hydration inhibited concentrate." *Briscoe*, col. 4, lines 40-49. Upon reversal of the hydration inhibition of the concentrates disclosed in *Briscoe*, by adding a base and additional water, a water insoluble residue would then form, resulting in a treatment fluid that would not be substantially devoid of a water insoluble gelling agent residue. See *Briscoe*, col. 7, lines 29-57.

The fact that *Briscoe* discloses that a base may be added to a treatment fluid upon reversal of the hydration inhibition of the concentrate is not sufficient to establish that the methods disclosed in *Briscoe* necessarily involve the use of a viscous gelled treating fluid that is "substantially devoid of an insoluble gelling agent residue and remains substantially devoid of

the insoluble gelling agent residue while in a subterranean zone.” As previously indicated, the dissolution of the residue is not usually instantaneous, but rather it is generally dissolved over a period of time. *Briscoe* does not disclose that the base is added to the fluid and given a sufficient amount of time to dissolve any residue that is present, and thus, even if that result may occur in *Briscoe*, it will not necessarily occur. Thus, *Briscoe* does not inherently disclose all the elements of Applicants’ claim 36.

Moreover, with respect to independent claim 45, Applicants respectfully assert that *Briscoe* does not disclose or suggest “allowing the base to dissolve substantially all of the water insoluble residue.” Rather, *Briscoe* merely discloses that “the pH can be raised to a value in the range of from about 8 to about 13 during or after the concentrate is diluted with water by combining a base therewith.” *Briscoe*, col. 7, lines 45-48. Thus, *Briscoe* does not disclose or suggest all elements of Applicants claim 45.

Therefore, Applicants respectfully assert that *Briscoe* does not disclose each element of independent claims 36 and 45, and thus those claims are patentable over *Briscoe*. Furthermore, since “a claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers,” and since claims 37-44 and 46-52 depend, either directly or indirectly, from claims 36 or 45, these dependent claims are allowable for at least the same reasons. See 35 U.S.C. § 112 ¶ 4 (2004). Accordingly, Applicants respectfully request the withdrawal of these rejections.

C. Rejections over *Brannon*

The Examiner has rejected claims 36-52 under 35 U.S.C. § 102(b) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over U.S. Patent No. 5,547,026 issued to Brannon (hereinafter “*Brannon*”).

With respect to this rejection, the Examiner states:

Brannon teaches guar based gels (abstract) for use in subterranean formations (col 1 line 7). Brannon adds 20 lbs + 100 lbs of polymer and a pH adjuster such as ammonium hydroxide to 1000 gallons of water (col 5 line 18-25). The pH is 10-11 (col 5 line 26). The pH and polymer concentration correspond to applicant’s preferred amounts (eg claim 40) and therefore it is presumed that no gelling agent residue remains. Brannon teaches the amount of gelling agent is initially 0-100 pounds per thousand gallons (col 4 line 37) with a later addition of 10-300 pounds more (col 4 line 51). Note that applicant (paragraph 4) considers “insoluble

residues” to be proteins, cellulose and fibers - not the guar itself. Therefore, Brannon’s late added unhydrated guar cannot be considered an “insoluble residue” based on applicants’s definitions. Any proteins, cellulose, fiber contained within the late added unhydrated guar, will immediately dissolve upon hydration due to the pH.

(Office Action, pages 3-4.) Applicants respectfully disagree. Applicants submit that the Examiner has not shown that *Brannon* discloses or suggests every element as recited in claims 36-52 as required to anticipate the claims under 35 U.S.C. § 102(b), or to obviate the claims under 35 U.S.C. § 103(a). MPEP § 2131, 2142.

In particular, with respect to independent claim 36, Applicants respectfully submit that *Brannon* does not explicitly disclose or suggest the use of a viscous gelled treating fluid that is “substantially devoid of an insoluble gelling agent residue and remains substantially devoid of the insoluble gelling agent residue while in a subterranean zone.” Nor does *Brannon* inherently disclose this missing recitation. Rather, *Brannon* discloses a blocking gel that would have a gelling agent residue present when the gel is placed into a subterranean zone, which may later be degraded by an enzyme breaker. *Brannon*, col. 5, line 57 - col. 6, line 6.

Moreover, with respect to independent claim 45, Applicants respectfully assert that *Brannon* does not disclose or suggest “allowing the base to dissolve substantially all of the water insoluble residue.” Rather, *Brannon* discloses that “[i]t is generally desirable to raise the pH of the fluid above about 9.0, most preferably in the range of from about 10.0-11.0 to limit the hydration of the additional polymer.” *Brannon*, col. 5, lines 23-27 (emphasis added). Thus, *Brannon* does not disclose or suggest all elements of Applicants claim 45.

Therefore, Applicants respectfully assert that *Brannon* does not disclose each element of independent claims 36 and 45, and thus those claims are patentable over *Brannon*. Furthermore, since “a claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers,” and since claims 37-44 and 46-52 depend, either directly or indirectly, from claims 36 or 45, these dependent claims are allowable for at least the same reasons. See 35 U.S.C. § 112 ¶ 4 (2004). Accordingly, Applicants respectfully request the withdrawal of these rejections.

D. Rejections over *Yeh*

The Examiner has rejected claims 36-52 under 35 U.S.C. § 102(b) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over U.S. Patent No. 5,536,825 issued to *Yeh, et al.* (hereinafter "*Yeh*").

With respect to this rejection, the Examiner states:

Yeh produced polygalactomannan which transmits light (abstract). The light transmission is believed to be due to the low insolubles (col 1 line 45; col 2 line 67; col 6 line 34). *Yeh*'s method involves treating a material such as hydroxypropylguar (col 5 line 42) with a solution of NaOH (col 4 line 26-41). *Yeh* then washes (col 4 line 42) and dries (col 5 line 3) the polygalactomannan. The resulting material will form stable aqueous solutions (col 6 line 45) and is useful in oil recovery (col 6 line 56). *Yeh*'s "extra" washing and drying steps are not excluded by applicant's claims.

(Office Action, page 4.) Applicants respectfully disagree. Applicants submit that the Examiner has not shown that *Yeh* discloses or suggests every element as recited in claims 36-52 as required to anticipate the claims under 35 U.S.C. § 102(b), or to obviate the claims under 35 U.S.C. § 103(a). MPEP § 2131, 2142.

In particular, with respect to independent claim 36, Applicants respectfully submit that *Yeh* does not explicitly disclose or suggest the use of a viscous gelled treating fluid that is "substantially devoid of an insoluble gelling agent residue and remains substantially devoid of the insoluble gelling agent residue while in a subterranean zone." Nor does *Yeh* inherently disclose this missing recitation. Rather, *Yeh* discloses that "the inventive materials have low enzymatic hydrolysis residues. . . [of] about 1.0-2.0%." *Yeh*, col. 6, lines 39-43.

Moreover, with respect to independent claim 45, Applicants respectfully assert that *Yeh* does not disclose or suggest "mixing a gelling agent selected from the group consisting of galactomannan gums and derivatives thereof with water to form a viscous gelled fluid comprising a hydrated gelling agent and a water insoluble residue; (ii) mixing a base with the viscous gelled fluid; [and] (iii) allowing the base to dissolve substantially all of the water insoluble residue." Rather, *Yeh* discloses that a basic solution may be added to unhydrated guar splits and then the splits may be washed with water after the base solution is completely absorbed by the splits. *Yeh*, col. 4, lines 26-50 (emphasis added). Thus, *Yeh* does not disclose or suggest all elements of Applicants claim 45.

Therefore, Applicants respectfully assert that *Yeh* does not disclose each element of independent claims 36 and 45, and thus those claims are patentable over *Yeh*. Furthermore, since “a claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers,” and since claims 37-44 and 46-52 depend, either directly or indirectly, from claims 36 or 45, these dependent claims are allowable for at least the same reasons. *See* 35 U.S.C. § 112 ¶ 4 (2004). Accordingly, Applicants respectfully request the withdrawal of these rejections.

IV. No Waiver

All of Applicants’ arguments and amendments are without prejudice or disclaimer. Additionally, Applicants have merely discussed example distinctions from the cited reference. Other distinctions may exist, and Applicants reserve the right to discuss these additional distinctions in a later Response or on Appeal, if appropriate. By not responding to additional statements made by the Examiner, Applicants do not acquiesce to the Examiner’s additional statements, such as, for example, any statements relating to what would be obvious to a person of ordinary skill in the art. The example distinctions discussed by Applicants are sufficient to overcome the rejections in this Office Action.

SUMMARY

In light of the above remarks, Applicants respectfully submit that the application is now in condition for allowance, and earnestly solicit timely notice of the same. Should the Examiner have any questions, comments or suggestions in furtherance of the prosecution of this application, the Examiner is invited to contact the attorney of record by telephone, facsimile, or electronic mail.

The Commissioner is hereby authorized to debit the Deposit Account of Baker Botts L.L.P., Deposit Account No. 02-0383 in the amount of \$180.00 for the fee under 37 C.F.R. § 1.17(p) for consideration of an Information Disclosure Statement after mailing of the first Non-Final Office Action on the merits. Applicants believe that no additional fees are due in association with this filing. However, should the Commissioner deem that any fees are due, including any fees for extensions of time, Applicants respectfully request that the Commissioner accept this as a Petition Therefor, and direct that any additional fees be charged to Baker Botts L.L.P. Deposit Account No. 02-0383, Order Number 063718.0992.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Elizabeth L. Durham', written over a horizontal line.

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